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(72) Inventor: UDAGAWA JUNICHI

(54) PREPARATION OF KIWI FRUIT SOLUTION

(57) Abstract:

PURPOSE: Kiwi fruit are crushed and its juice is squeezed out or cultured or naturally growing NIPPON SARUNASHI (a plant: Actinidia argula Planché) or MATATABI (Actinidia polygama Maxim) are extracted, then the extracts are combined with a preservative and kept cold whereby a Kiwi fruit extraction used in cosmetics is obtained.

CONSTITUTION: Kiwi fruits are washed with water, crushed, and its juice is squeezed, shins or the likes

are removed to prepare a solution. Or branches of naturally growing trees of Actinidia argula Planché, Actinidia polygama Maxim or Actinidia kolomikta Maxim are collected and the branches are inserted into bottles and the bottle opens are covered so that rain water may not come into the bottles to collect the tree juice and the juice is filtered. Then, a preservative is added to the resultant juice in an amount of 0.08% based on the juice and kept cool where by a stabilized kiwi solution is obtained. The preservative is, e.g., p-hydroxybenzoic acid ester. The kiwi fruit solution also can be used as a starting material for food.

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⑮ 発明の名称 キウイ液の製造方法

⑯ 特 願 昭59-263689

⑰ 出 願 昭59(1984)12月13日

⑱ 発 明 者 宇 田 川 順 一 沼田市屋形原町2326番地

⑲ 出 願 人 宇 田 川 順 一 沼田市屋形原町2326番地

明 細 書

1. 発明の名称

キウイ液の製造方法

2. 特許請求の範囲

(1) 水洗乾燥したキウイフルーツの果実を潰して果汁を抽出し、表皮等汚物を除去して液を採取し、防腐剤を混合し低温に保存する方法。

(2) 栽培または山野に自生している日本サルナシ、マタタビ、ミヤママタタビの樹枝を採取し、その切口をビン等の容器に、雨水等の浸入を防止するよう工作して、挿入し液を抽出、濾過して採取し、防腐剤を混合し低温に保存する方法。

3. 発明の詳細な説明

〔発明の目的〕

この発明は、化粧品として使用し、または化粧品の原料として使用できるキウイ液の製造方法に関するものである。従来使用されている化粧品は概ね化学化粧品であるために、皮膚傷害や

副作用等の化粧品公害を誘発激増させている欠点がある。

この発明は、優良な化粧品として使用できるキウイ液を、キウイフルーツの果実または野生の果樹から製造する方法を提供することを目的とする。

〔発明の構成〕

この発明によるキウイ液製造方法は次の通りである。

(1) 果実から取る場合

キウイフルーツを栽培して果実を取り、水洗乾燥し、潰して果汁を抽出し、表皮や汚物を除去して液を採取する。

(2) 山取りの場合

栽培又は山野に自生する野生果樹たる日本サルナシ、マタタビ、ミヤママタタビの樹枝を採取し、切断切口をビン等の容器に、雨水等の浸入しないように挿入口を被覆して挿入して液を抽出、濾過して採取する。

しかし長期保存する場合はキウイ液の含有成分

が維他命の栄養源となり、腐敗を生ずるので、パラオキシ安息香酸エステル等を液に対して、0.08多位の割合で加え濾布等で濾過する。また温度が25℃～30℃以上になると、液に含有される酵素類の反応あるいは酸酵が始まると考えられるので、低温保存する。

以上の通り防腐の上、低温保存することによって、良好かつ安定性あるヤウイ液を保持保存できる。

ヤウイ液はそれ自体でも自家用、民間用化粧品として使用できるが、次のような化学物質を加えることによって、さらに優良なるヤウイ液化粧品（化粧水）を期待できる。

ヤウイ液	100
アルコール（エタノール95多）	15
グリセリンまたはプロピレングリコール	20
硼酸	2
硼砂	2
苛性カリ（水酸化カリウム）	0.1
炭酸マグネシウム	2

なお数字は配合割合を示す。

〔発明の効果〕

ヤウイ液は、ヤウイフルーツの果実や日本サルナシ等の野生果樹から採取され、それ自体またはそれを原料として、化粧品公害から解放された優良なる美肌作用を有する自然化粧品として期待されているものであるが、この発明は簡単な方法や工程によってヤウイ液を採取製造する方法として、産業上有用である。

また、果実から製造するヤウイ液は、食品の原材料としても使用できるものである。

特許出願人 宇田川 順



(lǎng'gwǐj) matters

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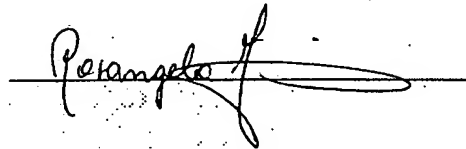
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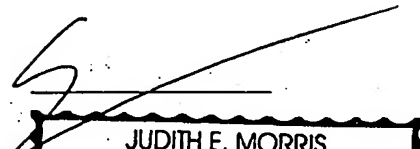
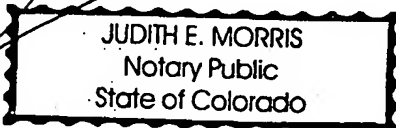
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JAPANESE PATENT 61-140510 AND AMENDMENT

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54. Title of Invention: Method of Preparing Kiwifruit Liquid
 21. Patent Application Number: Sho 59-263689
 22. Application Date: December 13, 1984
 72. Inventor: Junichi Udagawa, No. 2326 Yakatabara-machi, Numata City
 71. Applicant: Junichi Udagawa, No. 2326 Yakatabara-machi, Numata City

SPECIFICATION

1. TITLE OF INVENTION
 Method of Preparing Kiwifruit Liquid

2. WHAT IS CLAIMED IS:

(1) A method wherein kiwifruit fruit are washed with water and dried, crushed, the fruit juice is extracted, impurities such as peel are removed, the liquid is collected, a preservative is added, and it is stored at low temperature.

(2) A method wherein branches of Nippon sarunashi [*Actinidia arguta* Planché], matatabi [*Actinidia polygama* Maxim], or Miyama matatabi [*Actinidia kolomikta* Maxim], either cultivated or naturally growing in the fields and mountains, are collected, the cut end is put in a container such as a bottle arranged so that entry of rainwater, etc. is prevented, the inserted liquid is extracted and filtered and collected, a preservative is added, and it is stored at low temperature.

3. DETAILED EXPLANATION OF THE INVENTION
 Object of the Invention

The present invention pertains to a method of preparing a kiwifruit liquid that can be used as a cosmetic product or that can be used as a starting material for a cosmetic product. The cosmetic products that are conventionally used are mainly chemical cosmetic products, so they have the disadvantage of causing and intensifying cosmetic product pollution such as skin damage or side effects, etc.

The object of the present invention is to provide a method of preparing a kiwifruit liquid that can be used as a superior cosmetic product from kiwifruit fruit or wild fruit trees.

Constitution of the Invention

The kiwifruit liquid preparation method of the present invention is as follows.

(1) When extracted from fruit

Kiwifruit are cultivated and the fruit is collected, washed with water and dried, crushed, the fruit juice is extracted, impurities such as peel are removed, and the liquid is collected.

(2) When collected in the mountains

Branches of Nippon sarunashi, matatabi, or Miyama matatabi fruit trees, either cultivated or naturally growing in the fields and mountains, are collected, the cut end is put in a container such as a bottle with the insertion opening covered so that entry of rainwater, etc. is prevented, and the inserted liquid is extracted and filtered and collected.

However, when stored for a long time, the components of the kiwifruit liquid are a source of nutrition for bacteria, and decomposition occurs, so paraoxy-benzoic acid ester, etc. is added at the ratio of 0.08% of the liquid, and it is filtered through filter cloth, etc. Also, at temperatures above 25°C to 30°C, reaction of the enzymes included in the liquid or fermentation begins, so it is stored at low temperature.

Through this preservation and low-temperature storage it is possible to keep and store a kiwifruit liquid that is excellent and stable.

The kiwifruit liquid can be used as-is at home, or as a cosmetic product for the public. But by adding the following sort of chemical substances an even better kiwifruit liquid cosmetic product (cosmetic liquid) can be obtained.

Kiwifruit liquid	100
Alcohol (ethanol 95%)	15
Glycerin or propylene glycol	20
Boric acid	2
Borax	2
Caustic potash (potassium hydroxide)	0.1
Magnesium carbonate	2

The numbers indicate content ratio...

Effect of the Invention

Kiwifruit liquid is collected from kiwifruit fruit or wild fruit trees such as Nippon sarunashi, and used as-is or as a starting material for a natural cosmetic product that has an excellent skin beautifying effect and is free of cosmetic product pollution. The present invention has industrial applicability as a method of collecting and preparing kiwifruit liquid through a simple method or process.

Also, kiwifruit liquid prepared from fruit can also be used as a starting material for food products.

Applicant: Junichi Udagawa [seal]

Description of Amendment per Provisions of the Patent Law, Section 17^{bis}

Patent Application Sho 59-263689 (Laid-open Patent Application Sho 61-140510, published June 27, 1986, in Laid-open Patent Gazette 61-1406) has been amended under the provisions of the Patent Law, Section 17^{bis}, and so is described below. 3(2)

Int. Cl. ⁴	ID No.	Office Control No.
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Issued January 20, 1989

AMENDMENT (VOLUNTARY)

October //illegible//, 1988

To: Mr. Fumiaki Yoshida, Director-General, Japan Patent Office

1. Case Indicator
Patent Application Sho 59-263689
2. Title of Invention:
Fruit Juice of Actinidiceae Plants such as Kiwifruit, Cosmetic Products
Containing It, Food Products Containing It, and Preparation Method Therefor
3. Amending Party:
Relationship to Case: Applicant
Name: Junichi Udagawa
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4. Representative:
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Phone: 295-2954
5. Number of Inventions Added by Amendment:
1
6. Date of Amendment Order:
Voluntary
7. Subject of Amendment:
Specification (entire text)
8. Content of Amendment:
Per attachment
9. List of Attached Documents:
Power of Attorney, 1

[seal: Received by JPO, October 8, 1988, Application Section 2, //illegible//]

SPECIFICATION (Entire Text Amended)

1. TITLE OF INVENTION

Fruit Juice of Actinidiceae Plants such as Kiwifruit, Cosmetic Products Containing It, Food Products Containing It, and Preparation Method Therefor

2. WHAT IS CLAIMED IS:

- (1) Fruit juice of Actinidiceae plants such as kiwifruit, extracted from Actinidiceae plants such as kiwifruit, Nippon sarunashi, matatabi, Miyama matatabi, etc. using an extraction stage.
- (2) The fruit juice of Actinidiceae plants such as kiwifruit described in claim 1, wherein the plant is fruit.
- (3) The fruit juice of Actinidiceae plants such as kiwifruit described in claim 1, wherein the plant is non-fruit such as a stem or root, etc.
- (4) A cosmetic product containing the fruit juice of Actinidiceae plants such as kiwifruit described in any of claims 1 through 3.
- (5) A food product containing the fruit juice of Actinidiceae plants such as kiwifruit described in any of claims 1 through 3.
- (6) A cosmetic product containing the fruit juice of Actinidiceae plants such as kiwifruit described in claim 4, and containing alcohol, glycerin, and boric acid.
- (7) A method of preparing fruit juice of Actinidiceae plants such as kiwifruit, wherein Actinidiceae plants such as kiwifruit, Nippon sarunashi, matatabi, Miyama matatabi, etc. are broken down by a break-down means such as crushing, pulverization, cutting, etc. and the fruit juice is extracted, impurities such as peel, etc. are removed by a filter means, and fruit juice is collected.
- (8) The method of preparing fruit juice of Actinidiceae plants such as kiwifruit described in claim 7, wherein the plant is fruit, and the break-down means is crushing or pulverizing.
- (9) The method of preparing fruit juice of Actinidiceae plants such as kiwifruit described in claim 7, wherein the plant is non-fruit such as a stem or root, etc., and the break-down means is cutting, and the fruit juice is extracted from the cutting opening.

3. DETAILED EXPLANATION OF THE INVENTION

Industrial Field of Application

The present invention pertains to fruit juice of Actinidiceae plants such as kiwifruit, cosmetic products containing it, food products containing it, and a preparation method therefor. More specifically, it pertains to fruit juice of Actinidiceae plants such as kiwifruit that is a highly concentrated fruit juice, has few bad effects on the human body, has excellent properties, has many applications, and can easily be produced, and to cosmetic products containing it, food products containing it, and a preparation method therefor.

Prior Art

Hitherto, the cosmetic products that are generally used have been chemical cosmetic products, most of which are manufactured by chemical synthesis.

Nevertheless, such conventional chemical cosmetic products do not contain only substances whose effect on the human body is mild; a relatively large number of them cause cosmetic product pollution such as skin damage or side effects, etc., and they have the disadvantage of being deficient in safety.

Therefore one method of solving such conventional problems that has been proposed is to cut the stem of a loofah and to utilize the exudate exuded from the cut opening by root pressure as loofah liquid. But the amount that can be collected from one loofah is small, requiring a large quantity of loofahs, and much labor is required, and mass production is difficult, so the problems are considerable.

Problems the Invention Is to Solve

In light of such problems of the prior art, the object of the present invention is to provide fruit juice of Actinidaceae plants such as kiwifruit that is a highly concentrated fruit juice, has excellent manufacturing costs because fresh fruit juice can be obtained from fruit or non-fruit, and moreover has few bad effects on the human body, has many applications, and can easily be produced, and to cosmetic products containing it, food products containing it, and a preparation method therefor.

Means for Solving the Problems

This object is achieved, according to the present invention, by fruit juice of Actinidaceae plants such as kiwifruit, extracted from Actinidaceae plants such as kiwifruit, Nippon sarunashi, matatabi, Miyama matatabi, etc. using an extraction stage, cosmetic products containing fruit juice of Actinidaceae plants such as kiwifruit, food products containing fruit juice of Actinidaceae plants such as kiwifruit, and a method of preparing fruit juice of Actinidaceae plants such as kiwifruit, wherein Actinidaceae plants such as kiwifruit, Nippon sarunashi, matatabi, Miyama matatabi, etc. are broken down by a break-down means such as crushing, pulverization, cutting, etc. and the fruit juice is extracted, impurities such as peel, etc. are removed by a filter means, and fruit juice is collected.

Operation

In this manner, according to the present invention, it is possible to obtain fruit juice of Actinidaceae plants such as kiwifruit using an extraction means from fruit or non-fruit (stem, root, etc.) of Actinidaceae plants such as kiwifruit, and to utilize that fruit juice in cosmetic products and food products, etc.

Also, the fruit and non-fruit (stem, root, etc.) of Actinidaceae contain much fruit juice, and the fruit juice contains large quantities of vitamin C and proteolytic enzymes, so it can be effectively utilized as a food product or a component of a food product.

Also, this fruit juice is obtained from naturally obtained plants, so its effect on the human body is mild, it has almost no effect on the human body such as side effects except in special cases, and it has excellent basic properties such as moisture retention and a refreshing feeling and suitable aroma, etc. so it can be effectively utilized as a natural cosmetic product that has an excellent skin beautifying effect free of cosmetic product pollution, and in a wide range of other applications, both as-is and as a component.

Also, according to the inventive method, a relatively large amount of fruit juice can be obtained by a few simple steps, so there are cost advantages and it produces the dramatic effect of producing fruit juice with excellent basic properties and high productivity.

In addition, special equipment or power is not required. Existing or common production equipment can be employed in the inventive production as-is. Therefore equipment expenses and running costs can be greatly reduced, and that effect is very large.

Embodiments

Next, the present invention shall be described in detail for specific embodiments.

That is, to explain the method of preparing fruit juice of Actinidaceae plants, using kiwifruit fruit juice as an example, the preparation method is as follows.

(1) When collecting kiwifruit fruit juice from fruit of the kiwifruit:

First, kiwifruit fruit is collected from cultivated kiwifruit trees.

Next, the kiwifruit fruit is washed in water and then dried.

Then the fruit is crushed using a crushing means such as a compressor, etc., thereby extracting fruit juice from the kiwifruit fruit.

In addition, impurities such as peel and other impurities, etc. are removed from the fruit juice, and the sought-after kiwifruit fruit juice is collected.

(2) When collecting kiwifruit fruit juice from non-fruit such as stems or roots of kiwifruit:

First, one collects non-fruit such as stems, branches, roots, etc. of fruit trees of Actinidaceae such as Nippon sarunashi, matatabi, or Miyama matatabi fruit trees, either cultivated or naturally growing in the fields and mountains.

Next, the kiwifruit non-fruit such as stems, branches, roots, etc. is washed in water and then dried.

Then kiwifruit non-fruit such as stems, branches, roots, etc. is cut at appropriate locations.

Next, containers such as bottles are prepared whose insertion openings are covered so that unnecessary substances such as rainwater, etc. do not enter.

In addition, the cut openings of this cut non-fruit are oriented downward and the non-fruit is inserted in the above-described insertion openings.

Then the fruit juice oozing from the cut openings due to root pressure accumulates in the containers such as the above-described bottles, etc.

Next, the fruit juice is filtered using a filter means such as filters, etc., and impurities such as contaminants are removed from the fruit juice, and the sought-after kiwifruit fruit juice is collected.

The following sorts of components are contained in the kiwifruit fruit juice, which is one type of Actinidaceae collected as described above and used in the present invention.

(Excerpted from the Standard Tables of Food Composition in Japan, 4th Revised Edition, prepared by the Resources Council of the Science and Technology Agency of Japan)

Main Components (per 100g kiwifruit)

Organic Substances

Water	71.5g
Protein	0.9g
Lipids	0.3g
Sugars	10.6g

Minerals

Ca	23 mg
P	22 mg
Fe	0.3 mg
Na	2 mg
K	272 mg

Vitamins

Retinol	0 µg
Carotin	55 µg
B1	0 mg
B2	0.3 mg
Niacin	0.3 mg
C	68 mg

Kiwifruit fruit juice obtained in this manner stores easily and can be stored at low temperature for 3~4 months.

Also, when stored for a long time, the components of the kiwifruit fruit juice are a source of nutrition for bacteria, and decomposition occurs, so the following sort of decomposition prevention method (preservation method), for example, is preferred in order to prevent this decomposition.

That is, paraoxy-benzoic acid ester, etc. at the ratio of about 0.08% is added to the above-described kiwifruit fruit juice, and then it is filtered through filter cloth, etc.

Next, at temperatures above 25°C to 30°C, reaction of the enzymes contained in the fruit juice or fermentation begins, so when the atmosphere temperature is high, [the juice] is preferably stored at low temperature.

Through this sort of preservation treatment and low-temperature storage it is possible to keep and store a kiwifruit fruit juice that is excellent and stable.

Incidentally, kiwifruit fruit juice, which is one type of fruit juice of Actinidiceae plants which can be obtained from fruit or non-fruit (stem, root, etc.) of Actinidiceae plants such as the above-described kiwifruit, Nippon sarunashi, matatabi, or Miyama matatabi, etc., can be utilized as follows.

That is, kiwifruit fruit juice itself is sweet and moderately tart and has a refreshing flavor, so it can be utilized for food.

Also, this kiwifruit fruit juice can be used as-is at home, or as a cosmetic product for the public (cosmetic material). In addition, it can also be used as a cosmetic product that is mass produced (a cosmetic in the narrow sense).

Shown next is one example of a method of preparing a face lotion that is one type of cosmetic product.

Kiwifruit fruit juice cosmetic product (face lotion):

Compounding ratio

Kiwifruit fruit juice	100
Alcohol (ethanol 95%)	15
Glycerin or propylene glycol	20
Boric acid	2
Borax	2
Caustic potash (potassium hydroxide)	0.1
Magnesium carbonate	2

A face lotion prepared in this manner has fruit juice of kiwifruit, a naturally obtained plant, as its main ingredient, so its effect on the human body is mild, and it does not cause cosmetic product pollution such as skin damage or side effects as do conventional chemical cosmetic products, and its safety is excellent, and it has a refreshing feeling, and it has a suitable aroma, so it is excellent as a cosmetic product (a cosmetic product in the broad sense).

Next, the operation of the present invention shall be described.

In this manner, according to the present invention, it is possible to obtain fruit juice of Actinidiceae plants such as kiwifruit, from fruit or non-fruit (stem, root, etc.) of Actinidiceae plants such as kiwifruit, Nippon sarunashi, matatabi, or Miyama matatabi, etc.

The fruit or non-fruit (stem, root, etc.) of Actinidiceae plants have a large amount of fruit juice, so this fruit juice can easily be obtained in relatively large amounts.

Also, the fruit juice contains large amounts of vitamin C and proteolytic enzymes, so it is superior in terms of nutrients – vitamins, minerals, organic substances, etc. – and has lots of moisture retention and aroma; because of this, it can be effectively used not just for food but also in cosmetics and a wide range of other applications, both as-is and as a component.

In addition, the fruit juice obtained in this manner is obtained from naturally obtained plants, so its effect on the human body is mild, it has almost no effect on the human body except in special cases, and it has excellent basic properties such as a refreshing feeling and suitable aroma, etc. so it makes an excellent product when utilized not just as a food but also as a cosmetic product, etc.

Effect of the Invention

In this manner, according to the present invention, a fruit juice that has many comparatively superior properties can be obtained in abundance with high concentration by extracting it from fruit or non-fruit (stem, root, etc.) of Actinidiceae plants.

Also, the fruit juice contains large amounts of vitamin C and proteolytic enzymes, so it is superior in terms of nutrients – vitamins, minerals, organic substances, etc. – and can be effectively used as a food product or as a component for a food product.

In addition, the fruit juice obtained in this manner is obtained from naturally obtained plants, so its action on the human body is mild, it has almost no effect on the human body such as side effects except in special cases, and it has excellent basic properties such as moisture retention and a refreshing feeling and suitable aroma, etc.,

and has a wide range of applications, so it can be effectively utilized as a natural cosmetic product that has an excellent skin beautifying effect and is free of cosmetic product pollution and in many other applications, either as-is or as a component therefor.

Also, according to the present invention, a relatively large amount of fruit juice can be obtained by a few simple steps, so there are cost advantages and it produces the dramatic effect of producing fruit juice with excellent basic properties and high productivity.

In addition, special equipment or power is not required. Existing or common production equipment can be employed in the inventive production as-is. Therefore equipment expenses and running costs can be greatly reduced, and that effect is very large.

Applicant: Junichi Udagawa

Representative: Kaname Fukuoka, Patent Agent